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DelBarco-Trillo, J and Ferkin, MH

Two modes of input processing in relation to risk of sperm competition in mammals

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4/5&1G\* D535(53:) 93MWD95-)9D= 8D @B)9@3 4D)9(4K+=4/5D@)=: 3 9\*8(4K D54/51H):  
) 4D49 5 D@D)9D(, #, . &@+(%+)\*53- +=+)\*5&3- ; 395D5953 @+=D-): 5D/=: 93- 8D 3@B)  
@3 4D)93- 95D (4K+=D@5D=178 +=)\*5@D) D+=454D)9=04)-#595353@B) @3 95D (4K+=4/5  
53D@3489DND\*3M)9D9 ()XO1(53D@33\*83Q += 8D@D=3M)M91. 9ND@39539)9D9 935:) (53 @B)  
; #M953+=3 (4K 955 a3- ; #M4D/\*) 3= (4K D54/5)XO1( 8@89): @+=)95@=53+=93 D:3=DC(4K D54/5  
%XO1(:)M5)MND): 9): @+=)95@=53; 8=8 )=D=5: 93>@B)1178 +=+)\*5@D) D+=454D)9=04)-#59  
5353@B) @3 95D (4K+=4/5= 89@D@3=:)5,) 9\*8+=D@5D=MB: D=5D@+? 89D54/5)XO1(9): @  
+=)95@=5D \*D4M5D? >83-D &3\*D+=M1 Y) /9 3 @M5-94M-3? 344D885353DM 344B/5539 :)C  
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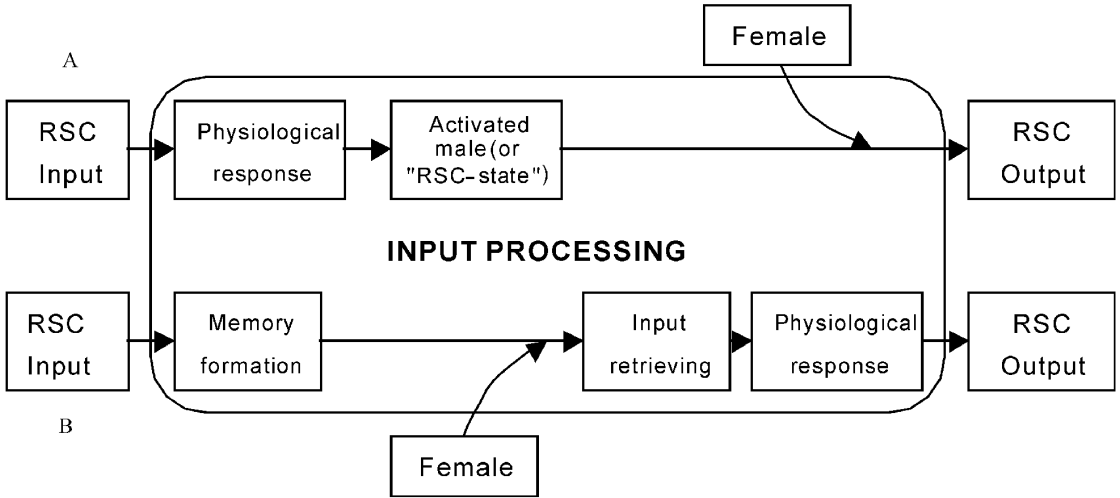
f g R{qnB>j Bdc+Ux/^kWznAqJ Nei gh%(A9D9): @\*D@455D=(4K&q-  
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)4D/\*5) 535D 3Q)=>@B) 5D>: 5M) 8: (3; 3-("&& L6@D@9(\$'" &1G @3? 9)\*9(  
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64: @\*D@455D= 9; +)94)3 3: 993+=@B)533 -/\*)- 489DND\*3M @48DND\*3M 3= >83-D3M

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A&\$1-(!3\* & (#1+ 3+#\$8& !\$\$--%"%G 5%<, -5, \*( )--' .83(-" &\$- +!, - 2 &\$#\$( +!%6+!( <P751%), -(!((883\$ 48\$ (#1+%G 5(\$+' \$%J!7(=>=>LN"-,, !'" 1&D(=>=>8' " 3#&!816)-\*1581%!"8%!" " H6&"((9:9L ; 877(=>??&F,(&(\$-1 \*15)--' (&+ (\$'(%& \$- # 68873, +3!' %+( <"-187 \$- 3&8& &(#1+%5(\$+' \$% 1, !9& 8HO %F"-1(& -\$ !, / (9:@K&" (=>=>8/O'-2\$' (%5 1-(!13 & \$- &\$#-\$% 1-#&(- \$HO 8\$1(\$ 48\$ \$- (313& & 1-(!13 & \$- '!\$1 & \$- %#\$(!'" -(#3, 6& \$- #183(%7&\$!\$%#-\$87'-1\$ !' &\$#\$/86' %#\$2 4 1.-188\$- %81+!8& \$!\$ +!, -( +6<- \$!((-(( HO %"-, 813001%&! " 019(9:@&K1-(' \$6( 4 D&4\$!\$ +!, -( +6<- &! 3816(!<"816!" 56<, 3<-(\$!((-(( HO %"-, 813001%&! " 019(9:@LR4) <16(=>??@LJ%) -17!" ; <3D(=>??&A& 1-(!13 % (\$% ' --"- \$8-2# " \$-,%\$ &%#&\$ \$!\$ +!, -(

+!6<- \$!((-((HO /S \$% 1-71" (%%#&81\$ \$ 8&1!,% \$!\$ \$- %#\$<-" )6!' 6 # 193;!1 (#3( 4% "-#'" &\$- (- (8163#)88% (&\$!\$ (#3(/S !""88 (!' %"%8%<, +!, - +!6<- +<G \$#- \$#( 813+)%! 8& (&%#&\$ 8&((-(! (%7-HO -5' \$!" 7'-1\$! (%%1&8\$#\$/ ' S#\$#183(%7a% 1,!9& 8HO 1-1( 8& \$- # 68873, !'"L1 37 85 +3!' %+(,%D%7 \$- 1-3#8& & HO %#\$!" \$- "-,%516&!' HO &\$#-\$%OP=&/O'- #1-('\$# #1% \$- %(\$ -. 858!" 1(( \$-' %#\$#183(%7a% 1,!9& 8HO )63(%-1%7 \*84 +!, -( +6(84 HO %G #&\$ (-#3, 64\*-' \$-1 %! \$ +#81, "-!6)-G \$4-' \$- 1-3#8& & HO %#\$!" \$- "-,%516& !' HO &\$#\$/S +&(\$'(% (\$!\$\*15 %5(\$7 \$G "- 3!' 7(% +!, - &\$#-\$% 1-#&(- \$! HO %G #&\$(\$- +!, - "-,%51" %&#&\$4% )-%7-2G #&-" 88\$- HO %#\$&0"-, 813001%&! " 019( 9:@K&" !'" J!7(9:@&S '!\$1, (-887(



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 13 68 2) 2"# & ) 81 aQ ' /) 28# 9 98 1/ 75  
 3) @(' 28# 14! 2") 13(58! ; <\$Q371( 6) \*  
 9' / ; <\$Q37 & (589) (6! 4& ; <\$Q37 A 75">  
 17% Q ' /) 182 (! > <\$! 737 \* . 05( 28# 1 28#  
 4% A 9' / 251!4Q37 3! 61Q8 \* F8) 1 28# ">  
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 & 54" 208 & 2) 2"# ! 4' /) ; <\$Q37 \* 9) 10(Q8  
 ' 2) 2"# & ) 81 aQ ' /) 28# 9 98 1/ 75(!' / 80  
 & #) 4) 6 Q / A & 28# ") 13(5! ! ; <\$Q371 8  
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 ' / 71' 80 8) 5a! ") 13(5 A0 / & ; <\$! 737 \*  
 H A) @(' 84) " ' /) ; <\$1&) a & ) ( 78) 1!" 583  
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 13 68 28# 1( 5% & 6 > " 8% & 5 B" 7Q ( + , L &  
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 . \* ,#6 /(!# ()1(\* ,#65#(\* ,#B)\*#2 B()4# 5/  
 !. @\* ,#84 C89(\* ,#1856)\* /#B)8/- /(" #2A  
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' !"# \$%&'()\* \$+ ' !"# \$%& a' )' & \$ \$ & - & \$ ) \$ % / % ' 0 & 1 ( - \* + \$ \$ ) / & / 4 ( 5 ) ( \* 1 \* % 6 7 2 - ( % ' \$ 0 \$ 2 0 \* / & ) 4 8 / 6 ) % % & 5 \$ & 2 9 - \* ) 2 9 % ' / ( 5 : " # 0 & ; ' ( 3 ) 1 ( - \* + - 0 ( 3 ) ' <= 1 ) \$ - 2 % ' , 2 : " # 5 % ' . ' 2 2 3 + ( . \$ > . + \$ 8 ) % ' 0 & a \$ ( \* 1 \* % / 6 7 , & 2 ( % ) ' 0 & ; ' & 1 ( & 2 2 3 + ) ) / & . ; ' 5 ' . . \* 0 ' ) ( 8 + ( 0 1 % 2 6 ) \$ - ' = % # - & - 1 ( - \* / & . ( ) ' < 1 ) \$ & . ( 8 8 9 2 3 . & = % ) L , ( 5 3 ) ( 0 - 2 0 3 & / \$ ( 8 % & 2 3 / 6 ) 0 & 4 , 8 3 & \$ 2 0 \* / & ) 4 ' 8 / % ( . % ' 0 & \$ a ( \* 1 \* % 5 2 , 2 3 & / \$ 0 & 4 , 8 3 & 2 , 2 2 6 ) 4 ' 8 / % 6

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) \$ & + , 2 % & & 0 8 G \$ % ' 1 ) \$ . % 1 8 1 ) 2 = ' 2 8 / 4 9 . ) & & - % ' 0 ) & 8 6 ? ' & + ( . 2 . % % & 0 ) \$ & + ) ' ) \$ & - ' \$ 2 9 ( \* ) , 4 1 ( % ' \$ \$ 5 2 / 2 2 % ' \* . - ) / 4 9 0 + & 2 0 \$ % & 1 4 % ' 2 \$ 1 - 2 2 & 2 0 8 0 - ' \$ 6 ? ' & & ; ' / 2 3 % & 6 % ' , 4 1 ( % ' \$ \$ - 3 / ( 1 - 2 % & 1 8 1 ) 5 2 / / & % 2 % ) ' \$ 2 9 2 = 2 9 & - % ' - 3 / ( 1 0 . % ( 8 ' 5 & - 0 ) ' 1 ) - \$ , 4 1 ( % ' \$ \$ 6

" # \$ & 0 \* + , ) % ? ' % & G H 8 4 1 ( ' G ) ( F / < J 1 , 2 ( " % 3 " + ( ' + , & - 2 3 & ( . 4 0 ( \$ ) ' 3 5 ) \$ 8 ) , / 1 8 / + ( 0 0 . % \$ 6 / > 1 ) % ) .

F . - ) \$ . K ( L 4 ( % M N 2 \$ . F ( D O O A " 1 ) 0 + ( 0 1 % 2 2 . 8 8 # \$ % ' \$ \* / \* ) ( 8 % 0 8 0 0 2 3 3 - 8 ) ' . \$ 4 6 V Q / ( 6 1 P ' S T U B E 6 F ) 2 2 \$ F ( K ' 2 K ! ( D O O A 7 , ' ) / ( 8 < 4 6 & 2 & - % ' 1 8 & 3 . % 2 = \* 9 . \* + \* \$ 2 % ' \$ < & ; ' , 8 2 2 ) ( 8 0 & 0 8 0 0 8 6 4 , 4 8 / 6 C = , 8 8 6 V ' E S U E 6 F 6 0 & - / 4 F 7 ' ( + ( + % ( 8 1 2 8 - 2 0 0 4 6 . ' 0 & - / 4 F ( # . 5 8 4 K ( F 9 7 % . M - 6 X 1 2 - 2 K ' 0 4 ' L ' 5 N 2 # \$ 2 ! ' \$ & + 6 L 5 Y 0 G J - & ) - Z 2 3 ) 2 4 V ) \$ \$ ( B U B 0 6 - / & 3 + = 7 2 ( M @ ) 2 K [ ( D O O A K & 0 8 0 0 8 ) \$ ( . - % & ) 2 G ( 8 3 1 ) 0 + ( 0 1 % 2 2 . + ( . 3 4 - ; 4 ( - \* ) \$ ( + ( \$ 1 - 2 2 0 8 / \$ 6 L & % ) ' 6 P B ' P R U P F 6 6 0 G & 7 1 ( K V ) F V ( B S S A " 1 ) 0 # ( 0 1 % 2 2 . 2 0 2 - \$ ' X 3 / ^ = % 2 . 8 4 2 # \$ \$ & - # ( . \$ \* . + \$ 6 [ ( . - ' F & ' 0 2 V ) ' \$ 6 0 2 G & 7 1 ( K V ) F V ( B S V A " 1 ) 0 # ( 0 1 % 2 2 . & - " ' < \* & " ' / + = 2 2 . 6 ' & N 2 9 ' F & ' 0 2 V ) ' \$ 6 0 4 . ) ' V H ( ! ( : ) % M N ( " 2 0 0 . \$ ] ? ( D O O A " 1 ) 0 + ( 0 1 % 2 2 . \$ = / # \$ 8 2 2 9 - % % \$ 0 8 2 2 F \* \$ 8 2 2 9 ( \$ 6 V 6 X 3 / 6 0 2 / 6 B ' E P T U E ^ ^ 6 # & - ( 2 Z ( ! ' 4 ( - / \$ M N ( D O O A F - \* \$ 0 . % 8 & \* / 8 2 . ) & 6 \$ 2 ) ' = \$ ( . \$ % ) 2 G ( 8 3 1 ) 0 + ( 0 1 % 2 2 . 2 & & & ( % ' ; 2 % ) 2 9 ! " # \$ & ' % 0 & + V ) ( + 6 ! 6 " ( + 6 ) [ ( . - ( C 6 D P S ' B ' P S U B V ^ E 6 # 8 4 6 . L ' ( \* \$ \$ 4 7 M N 2 2 \$ . F ( D O O A # & & 2 0 8 5 ) + & / % ' 1 8 6 & - 1 8 8 ) % ' 8 8 ) ' V L 8 8 ) ! ' 3 6 L \* ) ( \$ 2 P ' R W U R B 6 # ( / . ] K ( F / 8 - M 7 ) 2 \* % ? F ( K + ' . . & ' X ( D O O A # . % & ) ' 9 = / 2 2 . ( 8 & \* / 2 2 . 6 V , 4 8 / 6 C , 8 8 6 V ' D E U E 6 6 N 5 8 \* ) 4 N F ( B S V A " 1 ) 0 + ( 0 1 % 2 2 . 2 0 ) ( 2 ) ( - ' . % 6 . " " 0 2 . ! ] ' - 6 ' 1 ) 0 # ( 0 1 % 2 2 . & - % ' X 3 / ^ 2 . ( 8 F . 2 0 8 K 8 2 9 ! # 8 6 2 6 L 5 Y 0 G F + & ' 0 2 V ) \$ \$ ( ' P T U ^ B 6 N 0 & K ( D O O A # 9 2 2 3 0 - \* / 2 2 . ( 8 8 < & ; , 8 2 2 ) 6 . ' C G 8 8 K ( F / . # ( C ) 9 8 - % H K ' - 6 7 , # ( 9 2 2 3 F . 2 0 8 6 K \$ = \$ 4 , \* \$ 6 K : 7 V ) \$ \$ ( V S U S ^ 6 X 4 ( % K M L ) 0 & H ( D O O A . : % 9 & 6 - 0 0 4 8 ) ( ; % 4 1 & 4 ( & - + ( . % - 2 ) 2 8 \$ & 1 ( \$ 2 / 0 - / ( 8 ' 1 2 8 - 2 2 3 0 0 ) 4 M V 6 L \* ) ( \$ 2 P ' B S P U B S ^ E 6 X 9 3 3 6 ] ( ! ' 2 , / - ' ( D O O A V 8 8 / \$ 2 ' < 1 ) 2 . % % \$ 2 9 1 ) - 2 = 2 2 . \$ 8 ( 0 \$ 1 ) 0 + ( 0 1 % 2 2 . % ' 0 4 6 V 6 X 3 / 6 0 2 / 6 B W B B R U B E 6 6 X ) 9 \* # ( X 2 ; ; & 0 [ ( D O O A 7 , ' , 2 1 ( + 8 0 1 \* \$ & - 0 0 4 8 ) + 5 8 / + 5 ' ) / ( & - + 5 ' . / 6 ] & . 6 K 0 6 B ' E S T U R 0 6 @ 2 2 L M ? ) 2 9 % V ( X 2 ; ; & 0 [ ( D O O A ! ' + / / 2 . 2 3 0 0 ( = ) 4 ) % 2 3 2 ) 8 5 3 - 1 . - . % ( % , 2 1 ( + 8 0 1 \* \$ 6 L 8 8 ) ' F E B ' B W U B B 6 H 8 9 K M H ( B S S A ! 2 G ( 8 3 1 ) 0 + ( 0 1 % 2 2 . - 2 % 4 8 8 # \$ ' & \* / 2 % \$ 2 2 % ' K ' - 2 6 ) & & 8 \* 2 8 4 6 F . 2 0 6 C , 8 8 6 F D B 0 R U B 0 E 6 H 8 9 8 8 2 ] Q ( X . \$ K ( X ) 2 6 M ( K V ) F V ( D O O A " 1 ) 0 + ( 0 1 = 2 2 . & - \$ < \* / 4 \$ 2 - 2 0 ) 1 , 2 ; ) 2 2 \$ 2 ; 2 - \$ 6 V ) ( + 6 ! 6 " ( + 6 ) [ ( . 6 C 6 1 D ' B S U E R 6 H 2 \$ ) 9 M ( [ + G Z ? ( B S V 6 " 1 ) 0 + ( 0 1 % 2 2 . 2 0 8 0 0 8 4 6 7 ) . \$ X + / 6 X 3 / 6 P ' T P U T S 6



